In the Claims

1. (Currently amended) A communications network for connecting a number of nodes with a headend, the network comprising:

two optical networks each carrying a set of channels, each network being arranged to carry its respective set of channels in an opposite direction to that of the other network with respect to the nodes, wherein each network ~~comprising~~ comprises a plurality of periodic interleaving filters serially connected by optical waveguides such that an output port of one periodic interleaving ~~filters~~ filter is coupled to an input port of another periodic interleaving ~~filters~~ filter, and wherein an input ~~or output~~ for ~~each said~~ a node is formed by ~~a~~ non-serially connected ~~input or~~ output ~~port~~ ports of ~~a said~~ respective periodic interleaving filters from ~~each~~ said optical ~~network~~ networks, each of said respective interleaving periodic filters being arranged to drop at least one channel to said node by splitting said channel from channels received at a respective input to that filter.

2. (Cancelled)

3. (Original) A communications network as claimed in claim 1, wherein said optical networks are fibre networks.

4. (Cancelled)

5. (Currently amended) A communications network as claimed in claim 3, [[4]] wherein the periodic interleaving filters are fused fibre couplers.

6. (Previously presented) A communications network as claimed in claim 1, wherein two of said serially connected periodic interleaving filters are co-located.

7. (Currently amended) A communications network for connecting a number of nodes with a headend, the network comprising:

two optical networks each carrying a set of channels, each network being arranged to carry its respective set of channels in an opposite direction to that of the other network with respect to the nodes, wherein each network ~~comprising~~ comprises a plurality of periodic interleaving filters serially connected by optical waveguides such that an output port of one periodic interleaving ~~filters~~ filter is coupled to an input port of another periodic interleaving ~~filters~~ filter, and wherein an input ~~or output~~ for ~~each said~~ a node is formed by ~~a~~ non-serially connected ~~input or~~ output ~~port~~ ports of ~~a said~~ respective periodic interleaving filters from said optical networks, each of said respective interleaving periodic filters being arranged to drop at least one channel to said node by splitting said channel from channels received at a respective input to that filter;

wherein the two optical networks together form a ring architecture.

8. (Currently amended) A method of operating a communications network for connecting a number of nodes with a headend, the network comprising:

two optical networks each carrying a set of channels, each network being arranged to carry its respective set of channels in an opposite direction to that of the other network with respect to the nodes, wherein each network ~~comprising~~ comprises a plurality of periodic interleaving filters serially

connected by optical waveguides such that an output port of one periodic interleaving ~~filters~~ filter is coupled to an input port of another periodic interleaving ~~filters~~ filter, and wherein an input ~~or output~~ for ~~each said~~ a node is formed by ~~a~~ non-serially connected ~~input or~~ output ~~port~~ ports of ~~a said splitter or coupler~~ respective periodic interleaving filters from ~~each~~ said optical ~~network~~ networks, each of said respective interleaving periodic filters being arranged to drop at least one channel to said node by splitting said channel from channels received at a respective input to that filter; said method comprising:

routing traffic between said headend and said nodes.

9. (New) A communications network as claimed in claim 1, wherein an output for the node is formed by non-serially connected input ports of said respective periodic interleaving filters, each of said respective interleaving periodic filters being arranged to add at least one channel from the node to its network's set of channels by coupling said channel to channels received at a respective input to that filter.

10. (New) A communications network as claimed in claim 1, wherein each periodic interleaving filter comprising at least one of said networks is arranged to split channels received at an input of that filter equally between an output to a node associated with that filter and an output to a next periodic interleaving filter in the network.

11. (New) A communications network as claimed in claim 1, wherein the periodic interleaving filters of at least one of said networks are arranged in pairs, each pair of filters being arranged such that a first one of the filters splits channels received at an input to that filter between an output to a second filter

of the pair and an output to a next periodic interleaving filter in the network and said second filter splits the channels received from the first filter of the pair between an output to a node associated with the first filter of the pair and an output to another node in the network associated with the second filter of the pair.

12. (New) A communications network as claimed in claim 11, wherein the another node in the network comprises a next node in the network in a direction of channel transmission.

13. (New) A communications network as claimed in claim 11, wherein each of the filters of the pair is arranged to split channels received at its respective input equally between its outputs.

14. (New) A method as claimed in claim 8, wherein it includes adding at least one channel from a node to its network's set of channels by coupling said channel from an output of the node to channels received at a respective input to that filter.

15. (New) A method as claimed in claim 8, wherein it includes, for each periodic interleaving filter comprising at least one of said networks, splitting channels received at an input of that filter equally between an output to a node associated with that filter and an output to a next periodic interleaving filter in the network.

16. (New) A method as claimed in claim 8, wherein the periodic interleaving filters of at least one of said networks are arranged in pairs and the method includes splitting channels received at an input to a first filter of the pair between an output to a second filter of the pair and an output to a next periodic interleaving filter in the network and splitting the channels received at the second filter from the first filter between an output to a node associated with the first filter of the pair and an output to another node in the network associated with the second filter of the pair.

17. (New) A method as claimed in claim 16, wherein each of the filters of the pair splits channels received at its respective input equally between its outputs.

B1 con. X

18. (New) A communications network as claimed in claim 7, wherein an output for the node is formed by non-serially connected input ports of said respective periodic interleaving filters, each of said respective interleaving periodic filters being arranged to add at least one channel from the node to its network's set of channels by coupling said channel to channels received at a respective input to that filter.

19. (New) A communications network as claimed in claim 7, wherein each periodic interleaving filter comprising at least one of said networks is arranged to split channels received at an input of that filter equally between an output to a node associated with that filter and an output to a next periodic interleaving filter in the network.

20. (New) A communications network as claimed in claim 7, wherein the periodic interleaving filters of at least one of said networks are arranged in pairs, each pair of filters being arranged such that a first one of the filters splits channels received at an input to that filter between an output to a second filter of the pair and an output to a next periodic interleaving filter in the network and said second filter splits the channels received from the first filter of the pair between an output to a node associated with the first filter of the pair and an output to another node in the network associated with the second filter of the pair.

B1 cont.

21. (New) A communications network as claimed in claim 20, wherein the another node in the network comprises a next node in the network in a direction of channel transmission.

22. (New) A communications network as claimed in claim 20, wherein each of the filters of the pair is arranged to split channels received at its respective input equally between its outputs.